

**What is claimed is :**

## 1. A computer system with hot swap function, comprising:

a computer peripheral device having a signal connector in a  
predetermined position;

a mother board having a basic input output system (BIOS);

a software controller for controlling the signal communication of said  
computer system and the power of said computer peripheral device;

a circuit board forming on one slot for accommodating said computer  
peripheral device, comprising a first connector, a second connector and  
a signal connection device ;

wherein said computer peripheral device connects with one of said first  
connector and said second connector selectively by means of the  
predetermined position of said signal connector, then said signal  
connection device judges the type of said computer peripheral device  
from the connection signal and transmits the result of the judgment to  
said mother board, and then said software controller starts said computer  
peripheral device according to the result of the judgment.

2. The computer system as claimed in claim 1, comprising the  
following steps when inserting said computer peripheral device  
into the slot:

(a) said signal connector connects with said circuit board;

(b) the circuitry of said circuit board transmits the  
connection signal to said signal connection device;

(c) said signal connection device automatically detects the  
type of said computer peripheral device from the  
connection signal;

- (d) said BIOS gets the detection result from said signal connection device;
- (e) said software controller calls said BIOS and getting the detection result; and
- 5 (f) said software controller provides said computer peripheral device with the power and starts said computer peripheral device according to the detection result.
- 10 3. The computer system as claimed in claim 1, comprising the following steps when swapping said computer peripheral device from the slot:
- (a) said software controller gets the information of the position of said computer peripheral device;
- (b) said software controller shuts off said computer peripheral device and the power thereof; and
- 15 (c) said software controller permits said signal connector releasing from said circuit board.
- 20 4. The computer system as claimed in claim 1, further comprising an operation system (OS), through said software controller said operation system checks users' competence to decide on starting up and shutting off said computer peripheral device.
- 25 5. The computer system as claimed in claim 1, wherein said circuit board further comprises a third connector forming on another slot for accommodating said computer peripheral device, said third connector is for connecting with said computer peripheral device.
6. The computer system as claimed in claim 1, wherein said computer peripheral device can be one selected from floppy disk

drive (FDD), hard disk drive (HDD), CD-ROM, CD-R/W, DVD and other data storage devices.

7. The computer system as claimed in claim 1, wherein said first connector is for connecting with the computer peripheral device having FDD interface.

8. The computer system as claimed in claim 1, wherein said second connector and said third connector are for connecting with the computer peripheral device having IDE2 interface.

9. A circuit board for running the function of hot swap, which is formed on a slot for accommodating a computer peripheral device having a signal connector, said circuit board comprising:  
a first connector for connecting with said signal connector of said computer peripheral device;  
a second connector for connecting with said signal connector of said computer peripheral device; and  
a signal connection device for connecting with a mother board of a computer system, said mother board having a basic input output system (BIOS) and a circuitry for connecting said first connector and said second connector with said signal connection device;  
wherein said computer system further comprising a software controller for controlling the signal communication of said computer system and the power of said computer peripheral device, said computer peripheral device connects with one of said first connector and said second connector selectively by means of the predetermined position of said signal connector, then said signal

connection device judges the type of said computer peripheral device from the connection signal and transmits the result of the judgment to said mother board, and then said software controller starts said computer peripheral device according to the result of the judgment.

5 10. The circuit board as claimed in claim 9, further comprising a third connector forming on another slot for accommodating said computer peripheral device, said third connector is for connecting with said computer peripheral device.

10 11. The circuit board as claimed in claim 9, wherein said computer system further comprises an operation system (OS), through said software controller said operation system checks users' competence to decide on starting up and shutting off said computer peripheral device.

15 12. The circuit board as claimed in claim 9, wherein said computer peripheral device can be one selected from floppy disk drive (FDD), hard disk drive (HDD), CD-ROM, CD-R/W, DVD and other data storage devices.

20 13. The circuit board as claimed in claim 9, wherein said first connector is for connecting with the computer peripheral device having FDD interface.

14. The circuit board as claimed in claim 9, wherein said second connector and said third connector are for connecting with the computer peripheral device having IDE2 interface.